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THOMAS G. NEWMAN, EDITOR.

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EDITORIAL BUZZINGS.

Our Friends—The Flowers.—Under this heading the following lines by Tudor Williams, of Albany, N. Y., may be found in *Vick's Monthly* for July:

Ye beauteous blossoms, bright and frail,
My spirit's sweet enchanters, hail!
Ne'er did your gentle magic fail,
Whether ye blushing be, or pale,
Or dyed in sunlight's golden hue,
Or wear the sky's unsullied blue;
Swinging full censers of perfume,
Or gladening me with scentless bloom;
Whether low nestling on the ground,
Or decking shrub and tree are found;
Whether in summer's prime ye blow,
Or nigh the season of the snow;
Whether your home in open air
And all the clime's caprices dare,
Or in a crystal-walled retreat,
Pampered, ye bask in genial heat;
Whether the tiller's pride ye be,
Or thrive in wilds, unkempt and free;
Whether in myriads on the mead,
Tempting the *swarming bees* to feed,
Or in the twilight of the wood,
Pining, a sparse and puny brood,
Or, matchless, in lone nooks upspring,
Or to the creviced crags ye cling;
Wherever hiding, still my friends,
Whose graceful forms my speech transcends.
In every mood, of gloom or joy,
When thought is light, or cares annoy;
In sunny or in darksome hours,
Always my comrades boon, O, flowers!

Every Bee-Keeper who realizes the importance of the work now being done in the interest of the pursuit should send a dollar to this office and become a member of the National Bee-Keepers' Union for the ensuing year. "In Union there is strength." Reader, can you afford to remain outside any longer?

Nothing has yet Developed relative to the admission of queen-bees to Canadian mails, so far as we have been able to learn.

A Pleasant Notice is given to the Rev. L. L. Langstroth by Mr. O. Poole, a correspondent of the *Australasian Bee Journal*, which has just come to our desk. He seems to have a keen appreciation of the labors of Mr. Langstroth, and the benefits conferred upon modern apiculture by his inventions. He says:

One interesting feature in the AMERICAN BEE JOURNAL is the portrait and biographical sketch of some member of the bee-keeping fraternity. The number for Jan. 25 contains an excellent portrait of Father Langstroth, with a short but concise biography of the reverend gentleman, who is now in his 78th year. I am sorry to learn that he has very indifferent health, and that pecuniarily he is not situated as he should be. One of the American bee-societies recently raised a subscription and sent him a small donation, for which he expressed many grateful thanks.

Now, this is not as it should be. Do bee-keepers in America, in England and Australia realize to what extent they are indebted to Father Langstroth, not only for his invention of the frame hive, but also for his excellent work on apiculture? I trow not. If they did, not a moment would be lost in getting up an universal subscription over the whole bee-world in aid of this veteran apiculturist.

We should be glad to know that the bee-keepers of the world had subscribed to and provided a life annuity for this good man, who has benefited them so much by his invention of the movable-frame hive. In order to start such a matter we will make an annual subscription of $25.00. Who will follow? Let us all club in and do the thing handsomely. European and Australasian apiarists are invited to join with us in providing for this annuity.

Sometime since we mentioned the fact that a move was made on the quiet to provide an annuity for our aged friend, and that Dr. Miller had the matter in charge. Any further subscriptions should be sent to him, and not to us. If desirable they may be sent direct to Father Langstroth, whose address is 928 Steele Avenue, Dayton, O.

In order to ascertain what Americans had been doing in this matter, we wrote to Dr. C. C. Miller, of Marengo, Ills., and we received this reply:

FRIEND NEWMAN:—You ask me if there is anything for the public, with regard to the fund for Father Langstroth. I had no thought originally of saying anything publicly about it, but in courtesy to your request I may say that a response has been made very gratifying in some respects. You will remember that whatever was sent to Father L. was to be entirely a free-will offering out of a sense of justice or good-will toward the recipient, without even the reward of the little notoriety that might be obtained from the publication of the list of names of those participating. So it is a matter of unselfish and hearty cordiality, and this with warm words accompanying, highly heightens the value of the substantial aid received by the good old man. If a list of names were to be published with amounts attached, I have no doubt that the amount could be increased many times.

Our English friends are doing well in making the move they have, but it is only justice to say that a few on this side have responded just as liberally or more so, with no other reward than the consciousness of doing a right thing. Some forty have thus far responded in sums of one dollar and upwards, amounting to about $250 in all. How much happiness has been caused in the hearts of both donors and recipient is known to them alone. C. C. MILLER.

We have no desire to parade these subscriptions, but a certain amount of such must be done in order to get anything like a unanimity in the matter. We do hope that American apiarists will do their whole duty in this affair, and do it promptly.

Another Biographical Sketch will appear in out next issue, with a portrait of one of America's prominent apiarists.

The Third Annual Report of the General Manager of the National Bee-Keepers' Union will be published in a few days and mailed to all the members with Voting Blanks for officers for the coming year. We hope that a general response will result in renewed subscriptions for the coming year. As the fees are now reduced to a dollar a year, thousands should flock to its standard at once.

Queenlessness of a colony of bees should be remedied as soon as possible, for the very existence of the colony is in danger—the means of perpetuation having been lost. When dividing a colony it is sometimes uncertain in which "half" the queen may be. It can easily be determined which "half" is queenless by looking at each about half-an-hour after the division. The bees will be excited, some running about as if looking for something. The queen is lost, and they are trying to find her. That half is without a queen.

Goods of every kind and description sell better when put upon the market in a neat and attractive condition. Honey is no exception to this rule. Crates should be neat and clean; sections ought not to be covered with daubs of propolis here and there. The honey should be capped and nicely arranged in the crates, which should have at least one glass side, so as to prevent rough handling, by showing the delicate nature of the contents.

A Good apiarian display is to be made under Governmental supervision at the Cincinnati Centennial Exposition next month. Quite a number of articles, showing the history and development of the industry, have been sent from the Museum of the AMERICAN BEE JOURNAL. After the close of the Exposition they will be forwarded to the National Museum at Washington for permanent display. We will publish a list of such in our next issue.

We Regret to learn that Dr. G. L. Tinker has been quite ill for the past few weeks. He is now convalescing slowly.

GLEANS OF NEWS.

Bogus Honey and Comb.

We have the following letter from Mr. W. M. Evans, relative to the manufactured honey-comb story. He starts it in this manner:

AMHERST, Va., June 23, 1888.

EDITOR AMERICAN BEE JOURNAL:—On page 388 I see that you have published some correspondence, and made some statements which demand a few words from me. I will try to make my remarks as "short and sweet" as is possible.

"A reward of $1,000 to the person who will furnish evidence that Comb Honey has been manufactured, filled with honey and capped by machinery, etc.—A. I. Root."

Now compare this with Mr. Doolittle's statement in the *American Rural Home*, viz: "Mr. Root, of Ohio, has a standing offer of $1,000, for a sample of manufactured *honey in the comb*." (Italics are mine.) Here Mr. D. does not say a word about making comb, filling or capping it by machinery. If Mr. D. should feed his bees any mixture and cause one colony to store 500 pounds of comb honey in one season, would this not be "manufactured honey in the comb?" Can any sane man say that Mr. Root's offer and Mr. Doolittle's statement of it cover the same ground?

Tut! Tut! You are too fast! There is nothing in Mr. Root's challenge about offering a *Reward* of $1,000. A Reward is something given in exchange for goods, services required, etc. He did not desire to receive a sample of bogus comb honey! Mr. Root's words, in his card, were:

I will pay $1,000 in cash to any person who will tell me where comb honey is manufactured by machinery; or I will pay the same sum to any one who will find manufactured comb honey on the market for sale.

Is there a word about REWARD in that? That idea is manufactured by Mr. Evans, we fear, for capital. Again, the manner of wording this REWARD sentence makes it nonsensical. The Reward is offered for evidence that "comb honey has been manufactured, *filled with honey*, and capped by machinery, etc." "Comb honey" is comb filled with honey, and when it is so filled it cannot be *again filled* with honey, or anything else. Mr. Evans has conveniently transposed these two words from "honey-comb," as we used it in the twelfth line of the second column on page 388. If you could get "honey-comb" made, it could then, perhaps, be filled with honey, etc., but comb honey, being *full*, cannot be again filled with anything!

The unfortunate wording of both Mr. Root's and Mr. Doolittle's statement concerning the offer, is to be regretted, because it may lead to complications. It must be understood that the offer of Mr. Root is as stated on page 388 in the 12th, 13th and 14th lines of the middle column, viz: that he offers $1,000 for proof "that honey-comb is made, filled with glucose, and sealed up by a machine made for that purpose!" or for proof that such bogus stuff is on the market for sale. This is what Messrs. Root and Doolittle intended to state, even if they did not do so very clearly.

Mr. Evans then gives the following historic account of the controversy:

Now, at the time I wrote (May 4) to the *American Rural Home*, I had never heard about Mr. Root's offer, nor I did not know that any one had made any such statement calling for any such offer; and, besides this, I had some months before, in the same paper, referred to some very remarkable statements made by a Jersey and Hudson River apiarist to a reporter of the New York *Times*. One of them said that he had sold that season 10,000 pounds of apple blossom comb honey; and the other claimed to have sold 20,000 pounds. At the same time I offered $250 for a 5-pound box of pure apple-blossom comb honey, and my offer has not been accepted up to this date, and never will be.

At the time of the blooming of the apple trees, the bees are not in condition, usually, to gather much honey, even if the weather were propitious; and the little that is gathered is consumed by the bees while rearing the brood, so that comb honey from apple blossoms is a very rare article. That accounts for the non-acceptance of Mr. Evans' offer. Reporters get things MIXED, and very often convey a very different idea than that which was presented by the person interviewed. That might have been the case with the Hudson River apiarists—and probably it was a gross preversion of the matter as stated by them!

Again Mr. Evans reverts to "manufactured honey" in these words:

Now from Mr. Doolittle's reference to Mr. Root's offer, I understood that it applied to adulterated, or as Mr. D. puts it, "Manufactured *honey in the comb*;" and you will notice that I say that "the Wiley lie is true as to the adulteration of comb honey." I wrote to Prof. Wiley to find out whether he had ever stated that the comb had been made by machinery, though I then did not believe that he or any one else had ever made any such statement. I was not "non-plused" (as you say) at all, but merely wanted to get at the facts before I replied to Mr. Root's card.

To affirm that a *lie is true*, is equivalent to saying that it was wholly false, which it is, *tru*-ly!

Prof. Wiley's statement was made in these words:

In commercial honey, which is entirely free from bee-mediation, the comb is made of paraffine, and filled with pure glucose by appropriate machinery.

And it is a positive falsehood which he made, believing at the time (as he has since stated) that it was not possible commercially to imitate the comb. It was a wilful, malicious, unprovoked, and deliberate falsehood, and yet Mr. Evans tries to make us believe that it is a true statement of fact, after its author has been driven to admit its untruthfulness, and to state that he had no proof upon which to predicate it!!

Now here is a bluff from Mr. Evans. He says:

You say, I "propose to fight a wooden man in the shape of adulterated honey!" Now if you mean business, I will make my original proposition a little stronger; I will wager $5,000 that American apiarists have adulterated their comb honey. The names of those who have done so are recorded, and can be published if they wish it. "Barkis is willin'." "The proof of the pudding is in the eating." Try me.

The vile aspersion that "apiarists are adulterating their comb honey" by feeding the bees with trash, for that purpose, is too base to receive attention! It was born in the addled brains of an English clergyman tourist—repeated in the ears of our British cousins, to their delight, as some of the wonderful stories of this wonderful hemisphere of the West—and published in our British cotemporary apparently for the purpose of injuring the sale of American honey in Europe!

Now Mr. Evans tries to cram this tissue of falsehoods down our throats, and persuade us that it is an innocent sugar-coated pill.

True Christians are not gamblers; they do not wager, bet, lie, steal, etc. They leave that to the men of low morals, tendencies, and education. So we must decline to accept his "wager"—our principles are at stake!

Mr. Evans becomes aggressive, and makes this statement:

By the report of the Bee-Keepers' Convention last November, in Chicago, as published in the *Country Gentleman*, I notice that one apiarist said, that "it was none of the public's business what they fed their bees;" and this remarkable statement was at least endorsed by silence. Do you, Mr. Editor, endorse this sentiment?

There, again, is a misstatement of the matter presented. At the Chicago Convention, the subject of preparing food for the bees during their winter confinement, was discussed, and one member made this statement, as quoted from the official report as published in pamphlet form on pages 30 and 31:

Bees are not natives of a northern climate, and when we bring them here we may be obliged to make changes in their food; and to say that all this must be explained to the public is foolish; that is our business.

How different that is to the idea sought to be conveyed by Mr. Evans. He tries to convey the idea that bee-keepers feed the bees something to have stored in the surplus department to be sold as honey—while the discussion referred to is one on the best food to be supplied to bees in winter confinement to keep them from becoming diseased, because they have been taken from their natural, warm *habitat* to a cold northern latitude! How much interest have the public in such abstract discussions? Such absurd misrepresentations are certainly amusing.

From the fact that it WILL NOT PAY to feed the bees with glucose, or anything else, to have them store it in the surplus comb, there is no danger of the bee-keepers furnishing that bogus stuff to the bees to have them store it, and then to put it upon the market. Mr. Evans is, therefore, in a worse plight than ever, while attempting "to fight a wooden man in the shape of adulterated honey" in the comb.

Another point raised by Mr. Evans is thus stated:

One thing more, in relation to the publication of Prof. Wiley's letter to me: I do not know that he will care, yet Mr. Root should not have published a private letter without the consent of Prof. Wiley or myself.

Prof. Wiley never thought of asking permission of the apiarists to publish his lying fulmination, and anything that could explain his position on that subject belongs to the public. The fact is, that he should have written and *published* a refutation of his lying article years ago.

Mr. Evans than concludes with the following:

You say I am a "crank of the worst type," because I take more stock in the prayers of action, which give our neighbor the needed help or honest treatment, rather than by wind praying. Well, I am glad to be a "crank." I am a "crank" who does not believe that Jesus ever made or drank fermented hell-juice; and I also believe that we can do more for God in humanity, than by running a wind-mill for His glory.

Your "cranky" servant,
W. M. EVANS.

It is not in order to discuss political or religious topics in our columns, but when a man calls sacramental-wine "hell-juice," we think he has justly earned the title of *crank*.

Thus is Mr. Evans driven from every position he has taken. He said that the Wiley lie was true, but its author admits that it is a mere fabrication as a "scientific pleasantry!"

He positively denied that any responsible man ever made an offer of $1,000 for proof of the manufacture of honey-comb, filling it with bogus honey and sealing it over by machinery—but we introduced him to Mr. Root, who made the offer, who proved his identity, and exhibited unchallenged his responsibility for the amount offered!

He charges that the bees were being fed with glucose to store it in the surplus combs for the bee-keeper to put it upon the market for the fraudulent profit to be derived therefrom—but we have shown that repeated trials of even feeding back pure honey to be put by the bees into the combs to be sold as comb-honey is unprofitable, and can be done only at a loss! No one would think of adulterating any article, when it could not be done at a financial profit!

We might go through his whole list of points with the same disastrous result to him—but it is quite unnecessary! He is beaten at every turn, and now should "crawl into his hole" and "pull the hole in after him."

The North American Convention is to be held at Columbus, O,, but the time is not yet decided upon. The following from Dr. A. B. Mason on the subject will explain itself:

Several months since I suggested that the place selected for the holding of the next meeting of the North American Bee-Keepers' Society be changed from Toledo to Columbus, Ohio; and after quite a good deal of correspondence with some of the members of the Society, the Executive Committee decided to take a vote of the Society in the matter.

A circular was prepared by the Committee a short time since, and a copy, with a postal card directed to me, was sent to each member of the Society by the Secretary, stating the reasons for, and desirability of, making the change, with the request that each say on the postal what his or her wish was in the matter. When all but thirteen had voted, I wrote to each of them asking them to vote. All but six have responded, and so far every vote but one has been for the change; so the next meeting of the Society will be held in Columbus, Ohio.

I have delayed giving this notice, so that I might give the time of meeting, but as yet the Executive Committee has not been able to agree on the time.

Last week I sent the plan for the building for the Bee and Honey Department of the Ohio Centennial Exposition at Columbus, to the architect. It is to be 36x80 feet in size, and most of the space has been applied for. Applications for space and entries close Aug. 6.

A. B. MASON,
Pres. N. A. B. K. Society.

A Cuban Apiary is described by Mr. O. O. Poppleton, late of Williamstown, Iowa, but now in Havana, Cuba, in *Gleanings* for June 15, 1888. He described the hives used, and the primitive method of taking away the honey thus:

A few days ago, Senor Pedro Perez, who is as pleasant and friendly a neighbor as we ever had anywhere, offered to take me to see a native Cuban apiary, and I will describe the little I saw, so that your readers will get some idea how what is known to commerce as "Cuban honey" is obtained.

The apiary contained 80 colonies, which is a very small one for Cuba. The hives varied from 6 to 12 inches square, inside measure, the large majority being 8 and 9, and 3½ feet long, made by nailing four boards, of the proper width and length, together, and a short piece of board over one end. So far they were very similar, except being longer, to the skeps, or gums, so many of which are still in use in our own southern States. They were not stood upon end, as our people use them, but laid down on the side, the same as are the earthen hives in use in Cyprus and Syria. One entire end of the hives was left open, and this is the only peculiar feature there is which is different from methods in use in other countries, and which have already been described in the journals. The hives were laid on poles, so they were about 2 feet above the ground, the poles being supported on crotches, old boxes, barrels, or anything they could get. They were scattered around among some large banana plants, to protect from the sun.

At least once a year during the honey-flow in the winter, and sometimes also in August, everything in the hives except the bees and the small amount of comb that may contain the brood, is taken away and mashed and strained by the old-fashioned processes. The result is strained honey containing all the different grades and flavors that may have been gathered during the year.

It was really interesting to walk around among the hives and look directly into their open ends, and see the bees clustered so quietly on their combs; but I could not help thinking what an amount of fun there must be should they once get thoroughly to robbing. And, by the way, I find that bees do not rob so persistently here in the South as at the North, this being true, so far as I have observed, both in Florida and here in Cuba.

I am told that there are many large apiaries here in Cuba, of at least a thousand colonies each, all run on the same plan as is this small one I visited. I am also told that there are only three movable-comb apiaries on the island. The first was started by the Casanova Brothers, some five years ago; this one about two years ago, and one now under way by Mr. A. J. King, near the centre of the island.

So far I am quite favorably impressed with the honey resources of Cuba; and after I have been here at least a year, so as to know from personal knowledge what they really are, I will try to describe them.

Honey from the Poison-Ivy, etc.—John R. Sample, Elizaville, Ind., on June 18, 1888, writes:

Bees in this neighborhood are in good condition for the honey crop, but the weather is too dry for them to do much. My bees are working on what I suppose is poison-ivy. Is the honey poisonous? We are having a good rain now, and we hope to have a good honey-flow yet.

The American poison-ivy (*Toxicodendron*) is closely related to the poison-oak, of which there are two kinds very plentiful in California, one being poisonous, the other not. Mr. Pryal speaks thus of it, and the honey obtained from the one not poisonous:

I have studied this plant, of which there are two varieties in our vicinity—one poisonous and the other not—and I have found it to be a valuable honey-plant. In this I am borne out by the testimony of others in this State, who have watched bees working upon it during its season of blooming, which is in March and April—the two varieties keeping up a large supply of blossoms for almost two months. The honey is quite clear and delicious, and is in fact for clearness and flavor equal to any gathered in the vicinity of San Francisco.

We would refer Mr. Sample to the article on poisonous plants, page 425, first column, of last issue of the BEE JOURNAL, which shows that nectar, being a secretion of the plant cell, is charged with the active principle of the plant.

From C. H. Lake, of Catonsville, Md., comes a sheet of Comb Foundation of his "improved make." It has a parchment-paper "mid-rib," the corrugations being made in the usual way by passing the paper, with a sheet of wax on either side, through a Foundation Roller-Mill. He calls it the "indestructable," and we presume that it is rightly named; a sheet of the proper size for a Langstroth frame weighs 7 ounces, and costs about 20 cents.

Always Mention your Post-Office, County and State when writing to this office. No matter where you may happen to be for the hour when actually writing—never mention anything but your permanent address. To do otherwise leads to confusion, unless you desire your address changed. In that case state the old as well as the new address.

Scatter the Leaflets.—Look at the list (with prices) on the second page.

QUERIES AND REPLIES.

The Mating of Virgin Queens.

Written for the American Bee Journal

Query 556.—1. If it is necessary to put colonies as near as a foot apart, will virgin queens, on returning to the hives, be likely to enter the wrong ones? 2. How long after a prime swarm issues, will a virgin queen generally take her first flight?—Tenn.

1. Yes, unless well provided with land-marks.—C. C. MILLER.

1. To a certain extent. 2. From 15 to 21 days.—G. M. DOOLITTLE.

1. They will usually go to the right place. 2. About 13 days.—A. J. COOK.

1. I would be afraid of it. 2. From 10 to 20 days.—J. M. HAMBAUGH.

1. Not usually, but they may sometimes. 2. From 8 to 24 days; usually about 14 days.—A. B. MASON.

1. It is best to have them 3 feet apart. 2. If with a second swarm, 8 days after; if for her bridal flight, about 10 days.—P. L. VIALLON.

1. Sometimes they will, but generally they will get safely home. 2. Generally in about 2 weeks, sometimes less, and sometimes more.—M. MAHIN.

1. Yes, they may. 2. It depends on the age of the queen-cell at swarming time. It may be only 5 days, and it may be 10 or 12.—DADANT & SON.

1. Yes, unless some pains are taken to so fix the hives that they can be easily recognized. 2. It will depend upon the weather, to some extent. Under favorable circumstances, in 5 or 6 days.—J. E. POND.

1. In many instances, if no special "land-marks" are provided. 2. About 12 to 15 days.—JAMES HEDDON.

1. Not often, especially if a twig of leaves be suspended just over the entrance of the hive before the virgin queen is expected to issue. 2. About 13 or 14 days.—G. L. TINKER.

1. It is better to have the hives at least 4 feet apart. There is considerable danger of losing queens by entering the wrong hives if of the same appearance when only 1 foot apart. 2. I do not know certainly, but I think about 14 days.—C. H. DIBBERN.

1. Sometimes they do mistake their own hive. 2. Probably in 10 or 12 days, on an average. This depends upon the advancement of the queen-cells when the swarm leaves.—J. P. H. BROWN.

1. They will often enter the wrong hive at that distance, unless you have some distinctive mark placed on the hive. A piece of red cloth 6x12 inches is a good mark, tacked on the front of the hive. 2. From 2 to 21 days.—H. D. CUTTING.

1. Not often, except when their own bees threaten them as they alight at the entrance on returning from a flight. 2. Ten or twelve days, but the different circumstances make the time vary very much.—R. L. TAYLOR.

1. I think that they seldom get into the wrong hive. It would be an easy matter to put some temporary distinguishing mark in front of the hive from which a queen was expected to fly.—EUGENE SECOR.

They are not likely to do so, as a rule, but they sometimes may. There is more or less commotion at the entrance of the hive during the absence of the queen on her bridal tour. Italian bees often swarm without even starting a queen-cell, if they are strong, and there is a sudden flow of honey.—MRS. L. HARRISON.

1. I would not have my hives that close if I had to sell half of them to get more room. I do not think that young queens are often lost by entering the wrong hive. I have spent considerable time investigating the cause of the loss of so many young queens at mating time, and the cause is usually in their own homes. The young queens are "balled" when they return from their wedding flight, and sometimes killed. 2. If no after-swarm issues, the first young queen that hatches will destroy all queen-cells, and will be ready for her flight in 13 or 14 days after the swarm issues.—G. W. DEMAREE.

1. They may do so. It is best to mark the hives by paint of different colors, or by laying bricks or blocks or green boughs on the alighting-boards, so that the queen may distinguish her own hive on returning. 2. The time may vary greatly. I have examined a hive after swarming, and found no queen-cells even started, while on the same day I have examined another hive that had just swarmed, and found the virgin queen walking over the combs. The time has varied with me from 4 to 20 days. Some writers give rules, but I have never found any. The weather also affects the time of flight of the new queens.—J. M. SHUCK.

1. Yes; the danger lies in that direction. If they are placed so closely from necessity, they should be painted different colors, or some distinguishing objects should be placed to assist the young queen in marking the location of her hive. 2. Usually about two weeks—it may be much less, or more, depending upon the stage of development of the queen-cell at the time of the issuing of the prime swarm.—THE EDITOR.

Summer Management of Chaff-Packed Hives.

Written for the American Bee Journal

Query 557.—I use the double-walled chaff hives, the inside hive and also the surplus cases being ⅞ of an inch thick. In working for surplus in June and July, I remove the wall of chaff at the sides, leaving the cushion on top. Will it pay to return the chaff to the side walls after each manipulation? Or shall I leave it out entirely?—S. P., Mich.

Leave it out.—A. B. MASON.

I should leave it out.—EUGENE SECOR.

Leave it out entirely.—J. M. HAMBAUGH.

I would leave it out—J. P. H. BROWN.

I would leave it out, by all means.—G. W. DEMAREE.

No, no; leave it all off, certainly.—R. L. TAYLOR.

I would leave it out entirely.—MRS. L. HARRISON.

Leave the chaff out entirely, after settled warm weather arrives.—J. M. SHUCK.

It may be for your State, but in the South we use single-walled hives all the year round.—P. L. VIALLON.

After taking out the chaff in the summer time, leave it out; also the cushion.—G. L. TINKER.

I would not bother about returning the chaff; a dead air space, or none at all, is just as good.—C. H. DIBBERN.

If you mean that when the wall of chaff is removed from the sides, I think it will pay to return the chaff to the side-walls. If not, not.—M. MAHIN.

If I wanted to use a chaff-packed hive, I would use one that I did not have to disturb the packing at all.—H. D. CUTTING.

I see no reason for taking it out. Surely, it would better be put back if taken out. I presume that I do not understand the question.—A. J. COOK.

If I understand the question rightly, I should say that it was not necessary to return the chaff. Chaff is not necessary in any part of a hive in July weather.—G. M. DOOLITTLE.

Leave it out entirely during the summer season. It only tends to keep the sun from warming up the hive.—J. E. POND.

At the present prices of honey, the man who makes a lot of extra work will not succeed in our business.—JAMES HEDDON.

Chaff is entirely unnecessary in the hive, in summer. It keeps the hive too cool early in the season by not permitting the sun to affect the inside, and later in the season it tends to keep it too warm.—THE EDITOR.

CORRESPONDENCE.

The June Bees and Flowers.

Written for the Humane Journal
BY H. G. ADAMS.

The bees are buzzing in the lane,
And the sheep-bell hath a drowsy sound;
There is no wind to turn the vane,
And send the mill-sweeps round and round.

The laden wagon creaks along,
With fragrant hay upon it piled;
The little brook, with a sleepy song,
Winds here and there, like a wayward child.

And where its waters gather clear
Beside the bridge, in a shady pool,
The happy boys, without a fear,
Can bathe when they come out of school.

The bud, half hid in blossoms, flings
Its sweetness on the balmy air,
And seems to slumber as it sings,
As one who is without a care

Hot is the man who drives the sheep,
And hot are they who rake the hay;
All nature seems inclined to sleep,
Although 'tis broad and golden day.

The rooks are nodding on the trees,
Upon this sultry summer noon;
The heat is ninety odd degrees,
And 'tis the leafy month of June.

GOOD QUEENS.

The Laying Capacity of Good Queens.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

On page 364, Mr. James McNeill has a "conundrum" which he wishes Doolittle to answer, and as I am in this world for a purpose, and that purpose to help my fellow men, especially bee-keepers, by explaining to them all I know of our pursuit, and giving a little light on dark points as far as I can, I will try to do the best possible on this conundrum, leaving the readers of the AMERICAN BEE JOURNAL to see how nearly right I am.

In the first place, if I conveyed to the minds of the readers by the article on page 323, or by any article, that a queen lays 3,000 eggs every day for two or three months in succession, I wish to say that I did not intend to convey any such an idea, for I am satisfied that all queens have certain periods of rest during which they lay very few eggs, these periods being brought about by the weather, secretion of nectar by the flowers, amount of pollen brought in, etc.

Then again, I am satisfied that queens lay eggs at many times which the bees never allow to hatch, and also that eggs are kept from hatching for indefinite periods by the bees, when again they allow such "kept" eggs to hatch within 24 hours to a far greater number than any queen could lay in a day, the bees having all this under their control; all of which has an important bearing on the subject. However, the important part of the subject is in having a queen capable of laying 3,000 to 4,000 eggs a day when we most need them, and not one that can never lay more than from 800 to 1,200 under any circumstances, as is frequently the case with cheap queens, as the past has shown me.

A queen was once sent to me as a present, by quite a noted queen breeder, and with all the coaxing that I could do, she would not exceed 4 Gallup frames of brood, her usual amount being about 3. I kept her for two years, hoping that she would do better, but as no better results were attained, I became disgusted with her and killed her. But more closely to the point: "How do I manage to make 9 Gallup frames give room enough for a really good queen, as it would require 11 such to give room for a queen capable of laying 3,000 eggs a day?"

In this locality we have, as a rule, but one really good honey-flow, that being from basswood, which blooms from July 5 to the 15th, and lasts from one to three weeks, the extremes being 3 days for the shortest I ever knew, to 28 days as the longest, in which honey was gathered from it.

Now, as the wise man would prepare for a harvest by engaging help for a large harvest of any kind, having that help on hand at the needed time, I try to take advantage of what these good queens can be made to do by crowding them to their utmost capacity from 25 to 50 days before the basswood opens, so as to get the largest possible force of workers on hand just at the right time to give me the best results. To this end my hives are made so at this time of the year they can be enlarged by slipping out partition boards, so that 10, 11, 12, 13, 14, and even 15 frames can be used as a brood-chamber, thus giving the best of queens a chance to do all she is capable of doing; 15 frames in a hive, filled nearly solid with brood 30 or 40 days before the honey harvest, is one of the most pleasing sights to a honey-producer of anything in this line of business—except tons of honey being exchanged for *cash* at the end of the season.

Later on, the object of the bee-keeper who has no fall harvest should be to reduce the brood as much as possible, consistent with having the colony in good condition for winter, for the rearing of brood *very largely* right in the height of the honey harvest means much of our surplus being fed to this brood, which are only to become useless consumers after the honey harvest is over.

Working along the line of this reasoning, (which nearly 20 years of experience has proven to me to be sound logic), as the honey harvest commences, I begin to work in an opposite direction by contracting the room given to the queen, till at the close of the season, 5 to 7 Gallup frames of brood are all that my hives contain, and these are frequently from ¼ to ⅜ full of honey. This gives all the bees required for winter, and nearly enough honey for the same, so that little work is done along the feeding line.

If the above is not the right principle to work bees upon, then a part, at least, of my bee-keeping life has been in vain. A thorough trial of the plan will, I think, convince the most skeptical that it is *the* correct plan to work on.

In the above I think that Bro. McNeill will find a full answer to his conundrum, and I will only add that if queens of poor or only moderate value are used, our crop of honey must be poor or moderate; for only as we have a large number of bees at the right time, can we expect to attain to the highest point in the production of honey.

Borodino, N. Y.

WAX.

The Secretion of Wax—Is it Voluntary?

Written for the American Bee Journal
BY EDSON GERRY.

On page 325 this question was asked: "Is the secretion of wax a voluntary, or an involuntary, act?" An opinion was given, stating that it was "voluntary."

I am fully convinced from my own observation, that this secretion is involuntary; that the bees have no control over the generating of the secretions; and that it is a natural production, which may be seen on the under part of the abdomen of the young bees.

It is produced in a singular manner. The construction of the muscular rings around the abdomen are so formed that they are especially calculated to permit these secretions to ooze out from small holes located under these muscular rings; and when the secretions are dried, they form small, white flakes or pellets of wax; when ripe, if not removed, they will drop to the bottom of the hive.

Wax is produced only by such bees as are in a condition to be able to generate these secretions. My impression is that the young bees (while young they are fat like all the young of both animals and insects) would naturally

produce these secretions, and when they are of sufficient age to go to the field to labor (about 15 days old), they then soon become lean and poor, and can no longer produce the secretions from which the comb is made; whereas, if they continued to generate these secretions, when crawling over the blossoms to gather nectar, these flakes of wax would be lost, consequently there would be no wax to manufacture into comb. A bee when lean and poor cannot generate these secretions.

Lummi, Wash. Ter.

HISTORICAL.

North American Bee-Keepers' Society—Interesting Table.

Written for the American Bee Journal

BY M. M. BALDRIDGE.

The following table shows the number of annual meetings, where and when held, and three of the principal officers of the sessions named, who were elected at the previous meetings, after the first one:

No.	Place.	Date.	President.	Secretary.	Treasurer.
1st.	Indianapolis, Ind.	Dec. 21, 1870.	A. F. Moon	M. M. Baldridge	N. C. Mitchell.
2d.	Cleveland, O.	Dec. 6, 1871.	L. L. Langstroth	M. M. Baldridge	N. C. Mitchell.
3d.	Indianapolis Ind.	Dec. 4, 1872.	M. Quinby	H. A. King	N. C. Mitchell.
4th.	Louisville, Ky.	Dec. 3, 1873.	W. F. Clarke	H. A. King	M. L. Dunlap.
5th.	Pittsburgh, Pa.	Nov.11, 1874.	S. Hoagland	A. Pope	J. S. Hill.
6th.	Toledo, O.	Dec. 1, 1875.	W. F. Clarke	Dr. L. Brown	J. S. Hill.
7th.	Philadelphia, Pa.	Oct. 25, 1876.	G.W.Zimmerman	B. B. Overmeyer	J. S. Hill.
8th.	New York, N. Y.	Oct. 16, 1877.	W. J. Andrews	J. H. Nellis	J. S. Hill.
9th.	New York, N. Y.	Oct. 8, 1878.	J. H. Nellis	T. G. Newman	A. J. King.
10th.	Chicago, Ills.	Oct. 21, 1879.	T. G. Newman	E. Parmly	J. H. Nellis.
11th.	Cincinnati, O.	Sept.28,1880.	T. G. Newman	E. Parmly	Mrs. Dunham.
12th.	Lexington, Ky.	Oct. 5, 1881.	N. P. Allen	E. Parmly	Mrs. Dunham.
13th.	Cincinnati, O.	Oct 3, 1882.	A. J. Cook	E. Parmly	Mrs. Dunham.
14th.	Toronto, Ont.	Sept.18,1883.	D. A. Jones	A. J. Cook	C. F. Muth.
15th.	Rochester, N. Y.	Oct. 28, 1884.	L. L. Langstroth	C. C. Miller	C. F. Muth.
16th.	Detroit, Mich.	Dec. 8, 1885.	L. C. Root	W. Z. Hutchinson	C. F. Muth.
17th.	Indianapolis Ind.	Oct. 12, 1886.	H. D. Cutting	F. L. Dougherty	C. F. Muth.
18th.	Chicago, Ills.	Nov.15, 1887.	C. C. Miller	W. Z. Hutchinson	C. F. Muth.
19th.	Columbus, O.	———, 1888.	A. B. Mason	W. Z. Hutchinson	Mrs. Harrison

I have taken especial pains to look up the past history of this Society, and I think the foregoing will generally be found correct. Still a few words of explanation may be both advisable and necessary.

It is generally supposed that Father Langstroth was the first President of the North American Bee-Keepers' Society, but the foregoing table shows that A. F. Moon, now deceased, had that honor. The writer was present during that meeting, and knows that A. F. Moon was its President from first to last. Father Langstroth was elected as the President of the Society for the following year, and the writer was instructed so to notify him, and to secure his acceptance of the honor, after the meeting adjourned, which was done by and through a personal visit to his home at Oxford, O.

As will also be seen, the writer was elected Secretary of the first meeting, and was re-elected to that office for the ensuing year. As will be remembered by a *few*, there were more or less trouble and jealousy, in the year 1870, about who should have the honor or credit of calling a National convention of bee-keepers, and the result was that there were two calls made—one for Indianapolis, by Prof. A. J. Cook, and the other for Cincinnati, by H. A. King. The Indianapolis convention met Dec. 21, 1870, and the Cincinnati convention on Feb. 8, 1871, and each held a two days' meeting.

Both conventions elected Father Langstroth for President, and N. C. Mitchell for Treasurer, but H. A. King was elected Secretary at Cincinnati to represent that convention for the ensuing year. Both conventions adjourned to meet in Cleveland, Ohio, on the same date, and at the same place. They so met, and as soon as they were called to order by W. F. Clarke, one of the Vice-Presidents, both associations were, by unanimous vote, dissolved for the purpose of *consolidation*.

The writer did not attend the Cincinnati convention, nor the one held the same year in Cleveland, nor in fact any of the annual meetings since, except the last one held in Chicago. So much for a historical explanation.

St. Charles, Ills.

WATER FOR BEES.

Bee-Pasturage, Providing Water for Bees, etc.

Written for the American Bee Journal

BY MRS. O. F. JACKSON.

If I were going to raise a plant exclusively for honey, it would be mother-wort. It requires very little cultivation the first year, and after that it will take care of itself. It blooms the first year, and remains in bloom until frost. I think that it stands the drouth better than melilot. It is so much liked by the bees that they will not leave it even for white clover. I believe that it will pay bee-keepers to raise this plant. It will grow in the fence-corners, and on waste land; then why not raise it for the bees?

There is another plant which I value very much, and that is the pleurisy-root. It grows in great abundance where the ground has never been cultivated. The honey from this plant is quite dark, but of excellent flavor. I sowed Alsike clover, but the drouth last year killed it.

I received a package of the Chapman honey-plant seed from our Representative in Congress. I have now about 100 plants, and judging from the long, fibrous roots, it might stand our Iowa winters, and be of some value to bee-keepers.

My plan for watering bees in summer is as follows: Take a keg and make a small hole near the bottom, so that the water can drop. Now place a box or board in a convenient place, cover it with several thicknesses of cloth (old grain sacks are best); put the keg on this, and the cloth will be wet all the time. Cover the keg to keep the bees from getting drowned. Fill it with fresh water every morning, and a handful of salt once a week.

Before I adopted the above plan the bees were a source of trouble around the wells, watering-troughs and swill-barrels, and hundreds were drowned. Now I have no trouble with them, and the house-pump is only a few yards from the bees.

The spring was very cold and late here, and our loss was greater than ever before. The complaint is almost universal among bee-keepers. If one is met, and asked how the bees wintered, "O, I had bad luck," will be the prompt reply.

But there are a few exceptions in favorable localities where they sustained no loss in wintering; but after all the failure of the past year, we are hopeful, and the prospect for a good harvest is quite encouraging.

Sigourney, Iowa.

LARVAL BEES.

The Glands and the Food of Larval Bees.

Written for Gleanings in Bee-Culture

BY PROF. A. J. COOK.

Since the article which I wrote on the glands of bees and the food of larvæ, I have had some correspondence with L. Stachelhausen, of Salem, Tex., one of our German-American bee-keepers whose information and opinion are worthy of great respect. He does not accept the view of Schiemenz and Leuckart, which I presented, but that of Schonfeld. He presents his case with so much of reason that I am a convert at once, as all must be if the facts stated are as he represents them, and I have little doubt but they are. I am glad we have one in our neighborhood who is so conversant with German research, and so excellent a

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scientist, that he sees the true bearing of each fact. I hope that he will not be allowed to longer hide his light under a bushel.

At my request, Mr. S. has consented to the publication of his views. He asks that I comment upon the subject, which I am very pleased to do, as I had already contemplated writing another article, giving the views of Schonfeld. I have re-written the article, and have commented in [ ]'s.—A. J. COOK.

Objections to the Gland Theory.

Until 1870 it was believed that chyme was fed to the young larvæ, or, rather, that the larval food in the cells is chyme. In that year, Von Siebold examined and described the salivary glands of the bee. The large size of these glands seemed to indicate that they had some other purpose than to secrete the saliva. It seemed possible that they might secrete the larval food. Fischer described these glands a year later, and expressed the same opinion as to their function. Leuckart then declared that he had taught this theory to his students for years.

I then thought this theory very plausible, and probably the true one; but I expected further study and a closer examination, but expected in vain. Von Siebold, and probably Leuckart as well, worked on other problems. I supposed a microscopic examination of the secretion from these glands would prove the identity of the same with the food of the larvæ, but no such proof was forthcoming. It may be said, that there is too little of the product of the glands for analysis. But just this seems to indicate that the comparatively small glands cannot secrete so large a quantity of larval food.

[This view alone would not count for much. There is too little nectar in most flowers for a successful analysis; yet the bees gather pounds of it in a day. Supposing that the lower head-glands of a single bee do not secrete enough material for successful analysis at any one time, yet thousands of bees might do this with the whole day before them, and have enough left to feed all the larvæ.]

In 1880, Schonfeld published his theory, which seemed to me nearer the truth.

Years before, Leuckart described the larval food as a granular, milky, uniformly colored fluid containing many microscopic corpuscles, similar or identical with the blood corpuscles, and with the corpuscles found in the chyle, or digested food, in the true stomach, which chyle passes directly through the walls of the stomach by osmosis. Wolff states that the blood corpuscles originate in the stomach.

Analogy of the mammalia favors the gland theory of Leuckart. It seems plausible that the young bee, like the young calf, is fed with milk; yet not so plausible when we remember that the larva is not a young bee. I would rather compare the larva to the embryo of a mammal, and this is nourished directly from the blood. The chyle of bees is, in fact, identical with their blood, and contains everything necessary to build up the body of the bee; so it seems rational and natural to suppose that the chyle is the larval food.

[Analogy is always an uncertain argument. In case of animals as wide apart as the mammalia and insects, it really has no force. Grant that it had, even then in the case in question it would be difficult to say which way the argument pointed.]

With higher animals, the origin of the chyle is more complicated, and digestion is completed in the small intestines. In bees, the structure of the canal is different; and it is possible that chyle originates in the stomach.

[Here chyle must mean the sum total of digestion. With higher animals, chyle means simply the digested fat, and is carried to the blood through a special system of vessels, while the other products of digestion are mainly absorbed directly by the blood-vessels.]

If the larval food and chyle are identical, of course we must depend on the microscope to prove it. If we examine the stomach of the worker-bee we find more or less partially digested food, but no chyle.

[From the fact that, in examining many bees, I have never found the granular milk-like substance fed to larval bees, was my principal reason for accepting the secretion rather than the digestion theory.]

Schonfeld made the following experiments, and hereby is explained how the chyle can be found in the true stomach of the nurse-bee:

a. Honey colored by cherry-juice is fed to bees in a starving condition.

b. Honey colored by holly-juice is fed in the same manner.

c. In like manner, honey mixed with pollen of the white lily, which is easy to distinguish with the microscope, was fed.

After feeding, in each case the contents of the stomach, and the larval food, were carefully examined with the microscope. In every case the food in the cells with larvæ was the same milky granular substance, with no color, nor any lily pollen. This larval food, then, could not consist of chyme or the material from the honey-stomach.

Every hour a nurse-bee was examined, and the process of digestion noted. The color was seen to fade out, *and the true chyle was found differing in nowise from the food given to the larvæ.* While in the intestine, red and dark-colored excrement, mixed with pollen-husks of the lily, were plainly evident. *Many bees were caught just about to feed the larvæ, and the chyle was found in each case.*

[This, of course, is crucial. Not finding chyle, like larval food, in the stomach, does not prove its universal absence. Finding it once, proves its existence. Granting the fact, the conclusion must follow.]

Salivary Glands of Bees.

All mature bees—workers, drones, and queens—possess—

I. The upper head salivary glands, and—

II. The thoracic salivary glands.

Besides these the worker-bees have—

III. The lower head salivary glands.

Glands I. and II. have a common ending at the base of the ligula, in the groove formed by the paraglossæ. This secretion can, as the tongue is extended, flow into the groove and wet the ligula, but can go no further, because the ligula, or sucking-tube, is no fountain-pump, and the larva has no sucking arrangement to draw this out.

[A stronger argument, perhaps, lies in the fact that drones and queens also have these glands, and surely they do not feed the larvæ. No one can think that these are the milk-glands, even if milk-glands exist.]

The secretion from glands I. is oily; that from glands II. watery, which would indicate that they possess a different function.

The function of the sucking-apparatus will show that the saliva is necessary to wet the ligula, and to make it possible that the nectar can ascend. It would require too much space here to explain the function of the sucking-apparatus, which is a misnomer, as bees neither suck nor lick.

[Very likely the saliva, like our own, may serve to aid in keeping parts moist; but from the size of the glands, and quantity of the secretion, this, as is our own case, must be incidental. I think our friend is surely mistaken in his last assertion. I think I have shown that bees do both suck and lick.]

If bees do change nectar more than to evaporate it—that is, if they change the kind of sugar (I am not sure that they do), then it is probably done by gland II. Such a change could be due only to a ferment, and could come only from the saliva.

[I know that bees change cane sugar to reducible sugar, both when fed cane syrup or nectar. I have had analysis made in both cases. While not all cane sugar would be reduced, most

would be. That the saliva from glands I. and II. does this there can be no doubt. Honey is digested nectar, the digesting ferment being this saliva. While the drones and queen are fed in part by the workers, yet they take honey; and unless this is fully digested by the workers, the drones and queen must finish the work, and so must have glands I. and II.]

The most important purpose of glands II., or their secretion is for the test-organs which are in the groove at the base of the ligula.

[I do not understand this point.]

Very likely the secretion from glands I. may be used to wet and smooth the newly formed cells. Thus these secretions are true saliva, and cannot be larval food. This is without doubt true. Yet organized liquids do often have a double use. The pancreatic juice in the higher animals digest starch, fat, and may digest the albuminoids—will in an alkaline liquid.

The Lower Head-Glands.

The ducts from the lower head-glands open into the lower part of the mouth, between the muscles of the mouth. If the bee chews, this secretion must surely empty and be mixed with the chewed material. This, then, is mixed with the pollen. This is certainly true; for the pollen in the honey-stomach shows some of its caps open or elevated; and as no gastric juice is secreted in the honey-stomach, this partial digestion is accomplished by the saliva, and presumably that from the lower head-glands. Further, this saliva is used in kneading the wax by the jaws. F. Huber (*New Observations*) says that the fresh wax scales and the chewed wax are chemically different; and Eulenmayer and Von Planta found in the wax scales 0.5977 per cent. nitrogen, while in the chewed wax there was 0.95 per cent. This must be due to this saliva. So we see that these glands secrete true saliva, and so cannot be organs to secrete bee-food.

[I have replied to the last argument before. The above positions are well taken. Is it not quite likely that these serve merely to mix with and partially digest the pollen, and that Wolff's glands at the base of the mandibles are the glands that moisten the wax?]

The large size of these glands is no argument favorable to the gland theory, if we take it into consideration that the saliva is very important in digestion, and in part takes the place of the gastric ferment of higher animals. Surely a large quantity of saliva is added to the pollen food of bees, and so this saliva is indirectly a part of the chyle and larval food.

[This is surely a powerful argument. We secrete saliva almost entirely to moisten our food, and the daily quantity is estimated at three pints. If this saliva in bees is to moisten the pollen, and the position of the duct adds powerfully to the argument, then much would certainly be needed. The fact, too, that drones and queens do not have these glands, and do not prepare their own nitrogenous food, is in harmony with, and, in fact, lends support to this view.]

We can find the same glands in other insects which do not feed the larva at all, as *Eristalis tenax*, which has these glands fully as large as those of the bee; and *Nepa cinerea*, which has these glands, and they are very similar to those in the bee.

[This is surely a very strong argument.]

The product of these glands cannot be spit into the cells, for bees never spit. Nor is it at all likely that this secretion is swallowed to be regurgitated into the cell. Nature always empties her products where they are to be used; so if there were milk-glands they would either empty into the honey-stomach, or else some apparatus would have been developed that this secretion might have been poured directly into the cells.

[I think these points are excellent.]

These glands are in full function all winter, when no brood is to be fed. They must then have another purpose.

[How is this when bees have no pollen for their winter food? Of course, they usually have the pollen.]

If a colony passes the winter queenless, and no brood be fed for five or six months, and then receives a frame of brood which has been kept out of the hive until the larvæ are in a starving condition, we observe that this brood is fed at once. If this food is a product of glands used only for such purpose, this would be absolutely impossible after such long rest.

[This is certainly a good point.]

If bees are fed honey mixed with indigo, the larvæ are no longer fed, but commence to starve, while the mature bees remain healthy. The indigo prevents contraction of the stomach, and so regurgitation is impossible; yet the food is digested and absorbed. If the larval food were a secretion it would still be supplied.

[Granting these facts, the conclusion must follow.]

The following experiments of Schonfeld prove that the larval food is chyle:

Bees were fed honey mixed with carmine. In the larval food of this colony, and also in the chyle of the true stomach of the bees, were found the chillinous points of the cochineal insects from which the carmine is made. The blood was normal, because the fine particles were not digested, and, of course, could not be absorbed. As a secretion is derived from the blood, the secretion could not have what the blood did not have.

[This is also a crucial argument. The facts granted, the conculsion must be.]

Powdered iron was fed, with the same results.

Again, bacteria were fed to the bees—at first *Bacterium termo*, and then the bacillus of foul brood—*Bacillus alveolaris*. In both cases the organisms were found in the larval food, but not in the blood of the nurse-bee. As these were not in the blood, they could not exist in a secretion from the blood.

[This is an interesting point, as it explains fully why the fasting method, or the changing of the bees to clean hives, cures this dreaded malady.]

Von Planta finds the food of the young larvæ as follows:

	Queens.	Workers.	Drones.
Albuminous,	46.5 ₱ cent.	50.16 ₱ cent.	39.91 ₱ cent.
Oil,	12.62 ₱ cent.	6.84 ₱ cent.	7.85 ₱ cent.
Sugar,	17.90 ₱ cent.	27.65 ₱ cent.	1.17 ₱ cent.

We see that the food for the different kinds of larvæ varies greatly in composition. If this is a secretion it could not vary, as the glands could not secrete arbitrarily a richer or a poorer substance. But if this is chyle, it is easy to understand its variability; it would necessarily result from a variation in the food of the nurse-bees as to honey, pollen, or water. The defenders of the gland theory say that the secretion may be mixed in the honey-stomach with honey or water—pollen is out of the question, as we have seen that it is not given undigested to the larvæ. The experiments with colored honey shows this to be untrue.

That chyme [Mr. S. uses this term to denote partly digested food] is added to the secretion of the gland is out of the question, because chyme is surely prepared in the true stomach, and not in the honey-stomach. In the chyme are the shells, or husks (cuticulæ) of the pollen, but no whole pollen grains. If we examine the stomachs of bees we shall never find such empty pollen grains—husks—in the honey-stomach, except in the case of quite young bees just recently emerged from the cells. These bees are fed by the older bees with chyme. In the true stomach we can find these shells, if we examine a bee at the proper stage of digestion.

As soon as the larva fills the bottom of the cell—from the close of the fourth day—the larva receives chyme, or partially digested material, from the true stomach, and this contains the cuticulæ. At first these are few, but more and more are added, so that, just before the cell is capped, they are

numerous. This is also true of color when colored honey is fed.

[This is very interesting, and bears the impress of truth. This chyme is fed to the larvæ of workers always, and sometimes, not always, I think, to the larvæ of queens.]

The defenders of the gland theory say that it is impossible that bees regurgitate any material from the true stomach in the cells; for, as Schiemenz has shown, the stomach-mouth is prolonged into the true stomach, and so would act as a valve, and prevent any of the contents of the true stomach from passing back into the honey-stomach and mouth. But Schonfeld has shown that this is a mistake. The muscles are so arranged that this prolongation can be drawn up, and so in nowise prevent regurgitation. The bee itself proves that it can, for the full-grown larva does receive chyme, the product of the true stomach, and not of the honey-stomach. If the bees can regurgitate chyme or partly digested food, they surely can chyle, or that which is fully digested. This is chyme and not pollen, as the husks show.

Why should we be surprised that the bee does this? It is a master of regurgitation, vomitting up all its honey, and some of it several times. A full understanding of the stomach-mouth enables us to understand how it regurgitates its chyme and chyle.

L. STACHELHAUSEN.

LARVÆ—NUCLEI.

Removing Sealed Larvæ—The Frames for Nuclei.

Written for the American Bee Journal

S. A. SHUCK.

In compliance with the Editor's request on page 405, I will answer the following questions from Mrs. Mary Blachly:

4. How should sealed larvæ be removed? 5. Is it necessary to remove it when pollen is plenty? 6. For a nucleus to keep queens over winter, how many frames of bees are needed, and how large should the frames be? Should there be empty frames put in with each queen's brood-chamber (or apartment).

4. With a thumb and finger pluck off the end of the cell, then with a small splinter or straw, such as timothy or blue-grass, lift the larva from the cell.

5. Yes. The principal object in removing the larvæ from all the cells found sealed on the fourth day after removing the queen, is to prevent 10 to 12 day queens.

6. This depends upon the method of wintering. If wintered on the summer stands, I should want a fair sized colony of bees, and not less than three frames the same size of those used in full colonies in my apiary, and these well packed for protection. I have wintered bees nicely in the cellar on three combs one-half the length and the same depth of the Langstroth combs. No; I should prefer to have the combs pretty well filled with good stores. If there is more than the bees can consume during the winter, it is much better than not enough.

The Rearing of Good Queens.

Concerning the rearing of good queens, perhaps it would not be out of place here to add a few remarks:

It should be remembered that the larvæ for good queens should be fed the royal food (food of larval queens) from the time the egg hatches until the cell is sealed. This is about five days.

When a queen is taken from a hive, it is some time before the bees miss her, and it is usually from 12 to 36 hours before they commence the construction of queen-cells.

Thus it will be seen that all cells, that are sealed inside of four days from the time the queen was removed, contain larvæ that were fed royal food for only a little over three days at the most, and in many instances less than three days. The queens from these cells will hatch in less than 12 days from the removal of the old queen.

These queens may prove to be quite prolific for a time, but they are very short lived, seldom living through the next season, and are the "cheap queens" so often condemned by our good editor.

With good Italian bees there is but little difficulty experienced in this direction, as it is seldom that young queens hatch in less than 14 days from the time the old queen was removed. But with black or hybrid bees it is quite different, as it is seldom over 12 days.

Liverpool, Ills.

FLORIDA.

A Beginner's Experience in Keeping Bees There.

Written for the American Bee Journal

BY N. C. LARSEN.

I began with 5 colonies of native brown bees in boxes or "gums." I let them swarm, and hived the swarm in a new hive on empty frames. I waited 21 days, and then transferred the old colony, using all the good comb that I could get. One of my old colonies had no brood, very little honey, and was queenless. I transferred them, but they left and went into an adjoining old colony which I transferred a few days afterward. Some of the old hives cast 2 swarms. I lost one fine swarm which was bound to go to the woods. They crossed the bay, or river, so I could not follow them. I finished up with hiving 6 good swarms and transferring 4 old colonies, leaving me with 10 colonies, all strong and doing well.

Having no foundation, I have had some trouble to get good, straight combs. Some of the colonies persisted in building the combs in all sorts of shapes, but the most of them have built nice, straight combs. I put the empty frames between full combs, and in that way I have compelled them to build nice combs. Six colonies have filled both stories full of comb; 1 colony has over 56 one-pound sections in wide frames, with separators; 3 colonies are yet working in the lower story, and all have plenty of sealed honey; I have not taken any from them yet, as I wanted them to fill up with combs. I think that some colonies have as much as 50 pounds of honey now, and if they continue to gather I will have to extract to give them room.

I painted the hives two good coats, placed them on wooden blocks 6 to 8 inches from the ground, under orange trees; I made boards about 30x30 inches, and nailed a 2x3 inch piece on each end, and placed them on top of the hive so as to shed the water. Those boards I value highly; they shield the hive from the sun and rain, and also keep the cover dry and tight.

The bees are of the large brown variety, with yellow and black bands. I suppose the old veterans would call them "blacks." They are very gentle and easy to handle. I very seldom get stung unless I hurt one of them. They gather lots of honey, and have never been hurt by the moth-worm, even in the "old gum." I have had them 4 years, and they have always done well. I like them so well that I shall keep them pure. Italians may be better, but these are surely good.

I live on a river, or bay, and have a water frontage for 1½ miles belonging to me. I think that I could keep 50 colonies with profit. At first I thought to get honey for home use, but I think now of preparing to make my own hives and frames, and foundation, as the freight down here is too high to think of buying everything. I have frames yet on hand for next season's increase.

My first swarm issued on March 14, and the last one on April 2. Our bees now are at their best, though I think they work all the year. I know they fly every day when it does not rain too hard—in fact, here it is always warm.

Shell Point, Fla.

CONVENTION DIRECTORY.

1888. *Time and Place of Meeting.*

Aug. 3. Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Aug. 14.—Colorado State, at Denver, Colo.
J. M. Clark, Sec., Denver, Colo.

Aug. 27.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 8.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Cells on a Square Inch of Comb.—James McNeill, Hudson, N. Y., on June 21, 1888, writes as follows on the above subject:

Mr. Weidman, on page 407, is in error in supposing that I did not take account of both sides of the comb in my estimate of the cell capacity of Mr. Doolittle's hive. As we usually reckon 25 cells to the square inch, a frame of 115 square inches of surface would contain 2,875 cells on each side. To save figures, I multiplied the 115 by 50, which gives the number of cells on both sides of the comb. Mr. Weidman makes the mistake of doubling the surface of the comb, and then multiplying by 50, which gives him just double the number of cells that are contained in 9 frames of 10¼x10¼ inches.

[You are quite correct. We referred to the mistake made by Mr. Weidman on page 419, of last week's issue.—ED.]

The White Clover Bloom.—B. H. Standish, Evansville, Wis., on June 22, 1888, writes:

White clover has been in bloom for two weeks here, and during that time we have had warm nights, more or less cloudy days, plenty of rain, and wind in the southwest—the conditions of perfect honey weather. But the bees have gathered very little honey—not 25 pounds of surplus in my 100 colonies here at home. People say, "There is lots of white clover this year;" but bee-keepers know better. There is not more than one-fourth of a full stand, and that amount seems overstocked by 100 colonies.

Strong Colonies, Tiering Up, etc.—H. C. Gifford, Morris, Ills., on June 21, 1888, writes:

Last fall I fed 21 colonies of bees 200 pounds of granulated sugar, and 10 pounds of uncapped honey. I packed them on the summer stands, and one colony starved to death; the balance wintered in good condition, but it was so cold and wet all the spring that they have not stored any honey yet. I never have had my bees stronger than they are at present. They have been ready to swarm for the last ten days, but they have not swarmed yet, although they are laying out all around the hives. I always place my hives up ½ inch all around, to cool the hives, and give the bees a chance to clean the bottom-board and keep it so; and also to give them more room. I always put the sections on as early as possible, to delay swarming as much as I can.

I am commencing to "tier up" with supers, hoping to prevent any swarming this season; for at this time, and especially such a season as this is, I would rather not have any swarms, for if we have a good fall, the honey that 20 strong colonies will store is worth more than the bees.

This has been the poorest season, up to the present time, that I have seen in 20 years. Many bees in this locality are swarming out, actually starved out; but the prospects are good for linden, which will come on soon. I am not discouraged, for the AMERICAN BEE JOURNAL gives me new life every week. The knowledge that I have gained from it in the last three weeks is worth five times its cost for the whole year. The benefits, and the plain, sensible reasons given by men of experience, derived from the system of "tiering up," to keep the bees all at work, and to give them plenty of room, and thereby destroy the inclination to swarm, is worth a great deal to any one who will practice it; and it costs money and time to learn these things by experience. I have never realized the half that I could from my bees, if I had taken the BEE JOURNAL years ago; and still my neighbors think that I am an expert, when in fact last year was my first real work in the bee-business, and I have kept bees for over 20 years.

No Room for Brood—Albino Bees.—Chas. D. Barber, Stockton, N. Y., on June 25, 1888, says:

Would it not be a good plan to take out some of the frames from my old colonies and put in empty ones? They have no place for brood, having filled it all with honey. They swarmed three times before June 20. The outlook is very good for a large honey crop. I have had 4 swarms from 2 colonies, and will have more soon. I have bought a queen and one pound of Albino bees, and as workers they are ahead of any bees that I have ever seen.

[If the queen has no place in which to lay eggs, the colony will soon become depleted. To take out the frames of honey which are more than are necessary to supply the needs of the bees, would be a wise act in this case, in order to give the queen the necessary room to keep up the strength of the colony.—ED.]

But Little White Clover.—Geo. Smith, Amadore, Mich., on June 21, 1888, says:

It looks at present as if the honey crop will be an entire failure. There is very little white clover, and but little honey in what white clover there is.

Managing Robber Bees, etc.—Ira N. Lyman, St. Peter, Nebr., on June 22, 1888, writes:

1. Do bees ever gather poison that kills them? I have a colony that has lost some bees. They came out of the hive and looked full, and do not fly, walk or run out of the hive. Some tried to fly, and fell in the grass, where they soon died. 2. My bees began robbing badly, and when they were flying thick, I carried away the hive that was being robbed, after closing the entrances of both hives. I then put the hive of the robber bees off its stand, and put the weak colony in the place of it. I kept the hive of the robbers closed over night, and put it in a new place, a hundred yards or more from the old site. I opened the hive of the weak colony as soon as it was put on the stand where the robber hive had stood. They carried their stolen sweets into the hive from which they stole it. The other colony seemed weak for awhile, and then were all right. Is that a good way to manage robber bees? I have done that way twice, and it seems to me it is a good way. I want to thank the readers of the BEE JOURNAL for information about Albinos and other bees, which I have received privately, and for circulars and books. Bees are not doing very well on the prairie. Honey is scarce yet. I have had no swarms, and swarming prospects are poor. I like the BEE JOURNAL first-rate.

1. The bees were evidently diseased, but it was not the result of gathering poisonous honey.

2. Interchanging hives is often practiced in case of robbing, and generally is an effectual cure.

Swarming, Chapman Honey-Plant, etc.—Mrs. J. B. Curlee, Tamaroa, Ills., on June 23, 1888, says:

Last year nearly all the bees starved here. I had 30 colonies, and lost all but 9. There are but few bees in this part of the State. We are having plenty of rain now, and bees are swarming. Bees here gather honey mostly from white clover (but it was all burned out last summer), and the Spanish-needle, which blooms in the fall. My Chapman honey-plant will be in bloom in a few days. It is 4 feet high, and has large balls on it, looking like the wild thistle.

White Clover not Plenty.—Dr. A. B. Mason, of Auburndale, O., on June 26, 1888, writes:

It has been a poor honey season in my locality. A few days last week were favorable, but now the cold and rain keep the pets at home. White clover is not very plenty, and but few bees are working on it.

The Queen-Excluding Honey-Boards.—J. F. McIntyre, of Fillmore, Calif., asks the following:

I have 500 colonies of bees in two-story 10-frame Langstroth hives. I do not want any more increase, as my field is fully stocked. I work exclusively for extracted honey. 1. Would you advise putting queen-excluding honey-boards on the hives of the whole 500 colonies? 2. How much would the honey-boards increase the disposition to swarm?

1. We should put on the queen-excluders.

2. In some years and some localities, such will tend to increase swarming—but this we would overcome in another way, which you will need any way, whether you use queen-excluding honey-boards or not.—HEDDON.

Honey Coming in Slowly.—Geo. Eidemiller, McGregor, Iowa, on June 25, 1888, says:

The honey comes in slowly. The season is too late, the nights too cold, and the honey-producing plants are too backward. Last year I started with 2 colonies; now I have 9 colonies. I am very much pleased with the AMERICAN BEE JOURNAL.

Your Full Address, plainly written, is very essential in order to avoid mistakes.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861 — OLDEST BEE PAPER IN AMERICA

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

If You Live near one post-office and get your mail at another, be sure to give the address that we have on our list.

Hilton's new pamphlet on Comb Honey Production has been reduced in price to 5 cents. For sale at this office.

If you Lose Money by carelessly enclosing it in a letter, it is without excuse, when a Money Order, which is perfectly safe, costs but 5 cents.

Paper Boxes—to hold a section of honey for retail dealers. We have two sizes on hand to carry sections 4¼x4¼ and 5¼x5¼. Price, $1.00 per 100, or $8.50 per 1,000.

Preserve Your Papers for future reference. If you have no **BINDER** we will mail you one for 60 cents; or you can have one FREE, if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

Yucca Brushes, for removing bees from the combs, are a soft, vegetable fiber, and do not irritate the bees. We supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

Please write *American Bee Journal* on the envelope when writing to this office. Several of our letters have already gone to another firm (a commission house), causing vexatious delay and trouble.

Home Markets for honey can be made by judiciously distributing the pamphlets, "Honey as Food and Medicine." Such will create a demand in any locality at remunerative prices. See list on the second page of this paper.

Apiary Register.—All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and begin to use it. The prices are as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

Photographs of Bee-Keepers.—The "medley" gotten up by E. O. Tuttle, containing the faces of 131 representative apiarists, and a printed sketch of each one, will be sent with the BEE JOURNAL for one year for $1.75; or we will present it *free*, by mail, to any one, for a club of three subscribers and $3.00.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	Club
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	1 50	1 40
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 60
Canadian Bee Journal	2 00	1 80
Canadian Honey Producer	1 40	1 30
The 8 above-named papers	5 65	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 00	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Iowa Homestead	2 00	1 90
How to Propagate Fruit	1 50	1 25
History of National Society	1 50	1 25

Cork for Winter Packing.—Its advantages are that it never becomes *musty*, and it is *odorless*. Cushions can be made of cloth and filled with the cork, for winter packing. We can supply all orders now at 10 cents per pound. Or a seamless sack of it, containing 15 pounds, for $1.00.

Red Labels for Pails.—We have three sizes of these Labels ranging in size for pails to hold from one to ten pounds of honey. Price, $1 for a hundred, with the name and address of the bee-keeper printed on them. Smaller quantities at one cent each; but we cannot print the name and address on less than 100. Larger quantities according to size, as follows:

	Size A.	Size B.	Size C.
250 Labels	$1.50	$2.00	$2.25
500 Labels	2 00	3.00	3.50
1,000 Labels	3.00	4.00	5.00

☞ Samples mailed free, upon application.

A Modern BEE-FARM, and its Economic Management; showing how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man. By S. Simmins. For sale at this office. Price, $1.

We Supply Chapman Honey-Plant **SEED** at the following prices: One ounce, 40 cents; 4 ounces, $1; ¼ pound, $1.75; 1 pound, $3. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

Alfalfa Clover.—For habits and cultivation of this honey-plant, see page 245. We supply the seed at the following prices:—Per lb., 22c.; per peck, $3.00; per half-bushel, $5.50; per bushel of 60 lb., $10.00. If wanted by mail, add 18 cents per pound for bag and postage.

Honey and Beeswax Market.

NEW YORK.

HONEY.—We quote: Fancy white in 1-lb. sections, 13@15c.; the same in 2-lbs., 10@11c.; buckwheat 1-lbs., 10c.; 2-lbs., 9c. Market dull. We are doing all we can to reduce stock, to make room for the new crop.
BEESWAX.—26c.

May 21. HILDRETH BROS., 28 & 30 W. Broadway, near Duane St.

SAN FRANCISCO.

HONEY.—We quote: White to extra white comb, 12½@15c.; amber, 8@11c. Extracted, white to extra white, 5½@6c.; amber, 4½@5c. Arrivals of the new crop are small, the estimates being an average crop.
BEESWAX.—20@24c.

June 18. O. B. SMITH & CO., 423 Front St.

DETROIT.

HONEY.—Best white in 1-lb. sections, 14c.—Dull.
BEESWAX.—23@24c.

June 14. M. H. HUNT, Bell Branch, Mich.

CHICAGO.

HONEY.—We get 15c. per lb. in a small way for best comb; and less for off grades. Extracted, best white, 7@8c. None of the new crop received yet, but there is more than sufficient of the old crop for the light demand.
BEESWAX.—22c.

Jun. 30. R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, 12c.; fancy 2-lbs., 10@11c.; fair white 1-lbs., 10@11c., and fair 2-lbs., 8@9c. Buckwheat 1-lbs., 7@8c. The demand is dull for comb but fair for extracted, of which new from the South is arriving, and sells for 55@65c. per gallon.
BEESWAX—Dull at 23½@24c.

Jun. 15. F. G. STROHMEYER & CO., 122 Water St.

CHICAGO.

HONEY.—We quote: Fancy white clover 1-lbs., 16@17c.; 2-lbs., 15@16c. Dark is slow sale at almost any price. Extracted is scarce, and sells at 7@10c.
BEESWAX.—23c.

Mar. 13. S. T. FISH & CO., 189 S. Water St.

CINCINNATI.

HONEY.—We quote extracted at 5@8c. per lb., for which demand is good. Comb honey, 12@15c.—Demand slow.
BEESWAX.—Demand is good—20@22c. per lb. for good to choice yellow, on arrival.

Jun. 14. C. F. MUTH & SON, Freeman & Central Av.

MILWAUKEE.

HONEY.—Choice white one-lb. sections, 16@17c.; 2-lbs., 15@16c.; 3-lbs., 14c. Extracted, white in kegs and ½-barrels, 8 to 8½c.; in tin and pails, 9½@10c.; dark in barrels and kegs, 5@7c. Market fair.
BEESWAX.—22@25c.

Apr. 23. A. V. BISHOP, 142 W. Water St.

DENVER.

HONEY.—Best white 1-lb. sections, 14@15c.; 2-lb. sections, 12c. Extracted, 6@7c.
BEESWAX.—20@23c.

Jun. 25. J. M. CLARK & CO., 1409 Fifteenth St.

KANSAS CITY.

HONEY.—We quote: Choice new 1-lb. sections in good demand at 15@16c., not glassed; dark ones not searched; 2-lbs. and extracted there is no demand for. Stock of old honey is light, and the sections are all glassed, which style the trade do not like.
BEESWAX.—None in market.

Jun. 30. HAMBLIN & BEARSS, 514 Walnut St.

BOSTON.

HONEY.—We quote: 1-lb. sections, 16@17c.; 2-lb. sections, 14@16c. Extracted, 8@9c. The market is not very brisk and sales are slow.
BEESWAX.—25 cts. per lb.

Mar. 24. BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—We quote: Choice new extracted, 5 to 5½c.; amber to light amber, 4½@4¾c. Choice comb in 1-lb. sections, 13@14c.; 2-lbs., 12@13c. Arrivals are small, as apiarists are holding back. Prices are considered high.
BEESWAX.—18@22c.

Jun. 25. SCHACHT & LEMCKE, 122-124 Davis St.

KANSAS CITY.

HONEY.—We quote: White 1-lbs., unglassed, 15c.; 1-lb., white, glassed, 14c.; dark, 1-lb., 2c. less. California, 2-lbs., comb, white, 13c. Extracted, 7c. Considerable old honey is in this market. No new yet in. Sales are very slow.
BEESWAX.—None on the market.

June 9. CLEMONS, CLOON & CO., cor 4th & Walnut.

ST. LOUIS.

HONEY.—We quote: Extracted, bright, 5@5½c.; dark, 4½@5c.; in cans, 7@8c. Comb, choice white clover, in prime order, 13½@15c.; dark, less. Market quiet with fair demand for extracted.
BEESWAX.—22c. for prime.

Jun. 27. D. G. TUTT & CO., Commercial St.

The Convention.—The pamphlet containing the report of the proceedings of the Union Convention in Chicago, is now published, and can be obtained at this office for 25 cents. Or bound up with the history of the International Society, and a full report of the Detroit and Indianapolis conventions, for 50 cents, postpaid.

Give a Copy of "Honey as Food and Medicine" to every one who buys a package of honey. It will sell lots of it.

Advertisements.

COMB HONEY WANTED.—Apiarists, send lowest figures, delivered here, C.O.D., for 1 and 2 lb. sections, 1st and 2nd quality.
HOWELL & CLEMENT,
27A1t 85 Dauphin St., NEW ORLEANS, LA.
Mention the American Bee Journal.

ITALIAN QUEENS by Return Mail.—Tested, $1.00; Untested, 75 cents. **Bees** 75 cents per pound. **Albino** Queens same price.
GEO. STUCKMAN,
27A1t NAPPANEE, IND.
Mention the American Bee Journal.

ALBINO QUEENS.—To those desiring to secure Albino Queens, reared by natural swarming—I will sell them during July, warranted purely mated, $1 each, or 6 for $5.
JOS. MOSER, Festina, Winneshiek Co., Iowa.
27A1t
Mention the American Bee Journal.

FOR SALE—600 Colonies in the movable-comb hives, at $4.00 for Italians, and $3.00 for Hybrids.
25A13t **G. H. ADAMS,** Troy, N. Y.
Mention the American Bee Journal.

ITALIAN QUEENS—Untested, 75c. each; 6 for $4.00; 12 for $7.50. Address,
26Atf John Nebel & Son, High Hill, Mo.
Mention the American Bee Journal.

SOUTHERN HONEY WANTED!

WE are likely to have good use for a lot of **Southern Honey** in the near future, and invite shipments **now.** Address,
CHAS. F. MUTH & SON,
26A3t Freeman & Cent. Ave., Cincinnati, O.
Mention the American Bee Journal.

HEDDON HIVES FOR SALE.

I **HAVE** a hundred, all complete—just finished. Purchaser given right to use them, by Mr. Heddon. Will sell at $3.00 each, in lots of 10 or more. Inquire of,
27Atf **E. D. KEENEY, Arcade, N. Y.**
Mention the American Bee Journal.

Queen Shipping-Cages.

WE have a lot of Queen-Cages, like the one illustrated, not provisioned, which we will sell **3 for a dime,** by mail, postpaid.
THOS. G. NEWMAN & SON,
923 & 925 West Madison-Street, - CHICAGO, ILLS.

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Early Nuclei & Italian Queens.
☞ Tenth annual Catalogue now ready.
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Mention the American Bee Journal.

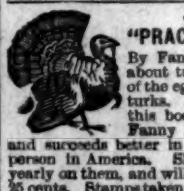
My 20th Annual Price-List of Italian, Cyprian and Holy-land Bees, Queens and Nuclei Colonies (a specialty); also Supplies—will be sent to all who send their names and addresses.
H. H. BROWN,
18C3t LIGHT STREET, Columbia Co., PA.
Mention the American Bee Journal.

Western BEE-KEEPERS' Supply Factory.

We manufacture Bee-Keepers' supplies of all kinds, *best quality at lowest prices.* Hives, Sections, Foundation, Extractors, Smokers, Crates, Veils, Feeders, Clover Seeds, Buckwheat, etc. Imported Italian Queens. Queens and Bees. Sample Copy of our Bee Journal, **"The Western Bee-Keeper,"** and latest Catalogue mailed Free to Bee-Keepers. Address
JOSEPH NYSEWANDER,
DES MOINES, IOWA.
5C6t
Mention the American Bee Journal.

Barnes' Foot-Power Machinery.

Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of beehives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 484 Ruby St., Rockford, Ill.
Mention the American Bee Journal.



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6C1t
Mention the American Bee Journal.

Friends, if you are in any way interested in
BEES OR HONEY
We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to
A. I. ROOT, Medina, Ohio.
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AND **OTHERS** should write to me for SPECIAL PRICES on **BEE-SUPPLIES** for this fall and winter.
☞ **A heavy Discount allowed.**
Address, **A. F. STAUFFER,**
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HOW TO RAISE COMB HONEY,

PAMPHLET full of new and improved methods; Price, 5 one-cent stamps. You need also my list of Italian **Queens, Bees** by the **lb.,** and Supplies. OLIVER FOSTER,
13Atf Mt. Vernon, Linn Co., Iowa.
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GLASS PAILS
FOR HONEY.

THESE Pails are made of the best quality of clear flint glass, with a ball and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.
Prices are as follows:

To hold 1 pound of honey, per dozen, ...			**$1.60**
"	2 pounds	"	**2.00**
"	3 "	"	**2.50**

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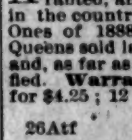

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